DISABILITY AND COMMUNICATION ACCESS BOARD

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SITE SPECIFIC ALTERNATE DESIGN

Pursuant to §103-50, Hawaii Revised Statutes (HRS), all buildings and facilities constructed by, or on behalf of the State or any county, shall conform to the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and amendments. In accordance to HRS §103-50 and Chapter 11-217, Hawaii Administrative Rules, the Disability and Communication Access Board has authority to issue interpretive opinions to HRS §103-50 design standards.

Docket: **DCAB 2001-12:** Request for a site-specific alternate design on ADAAG 4.5 Ground and Floor Surfaces. Request to substitute a three-foot wide concrete walkway to a new playground at Mountain View Elementary School on the Big Island, with the use of a three-foot wide walkway made of a plastic sub-surface reinforcement structure or interlocking grid system called *Gravelpave 2*.

Summary: According to product literature, the structure has fabric added to the back and creates a dust, weed, and pothole-free porous gravel parking/walking/riding area. *Dimensions:* individual rings are one inch deep and two inches in diameter. *Installation:* installed over a subbase of stone at a similar depth to what would be put under two inches of asphalt. Once the subbase is installed and compacted the Gravelpave is rolled out and nailed into place at the rate of four pins per square meter. Finally the product is back-filled with small, clean, and angular gravel a quarter inch above the ring and compacted into place. After compaction the fill stone should be flush with the top of the ring to prevent migration. *Size of stone:* small (3/8"-1/4"), washed, angular and hard, will lock together in the rings while large or rounded stone will migrate out of the rings into the surrounding area. *Base course:* sandy gravel base course allows enough void space for water to percolate. *Load:* 5,720 pounds per square inch (psi) capacity can support any load that is legal to drive on the street. Designed to transfer surface load to subbase, which should be designed to a depth that will support the anticipated loads. *Traffic:* designed to withstand high frequency traffic on a daily basis. *Maintenance:* requires very little maintenance when installed correctly. Areas of installation most frequently trafficked may require attention as gravel works its way out of the rings. Maintenance can be done by brooming the gravel back into place or adding a small amount of stone if necessary and should only require attention once or twice a year.

The Access Board's Bulletin #4 (April 1994) Surfaces, allows for "…compacted earth, soil treated with consolidants, or materials stabilized and retained by permanent or temporary geotextiles, gridforms, or similar construction (that) may perform satisfactorily for persons using wheelchairs and walking aids." *Weather extremes:* continuous, large amounts of rain cause possible erosion and puddles over a long period of rainfall. (Mountain View's typically exceptional rainfall (±200 inches per year) provides an excellent testing ground for the system's efficacy.)

Ruling: For buildings or facilities subject to HRS § 103-50,

ADAAG 4.3.6 Surface Textures, and 4.5.1 Ground and Floor Surfaces

A request for a site-specific alternate design is GRANTED for the installation of a three-foot-wide walkway to a new playground at Mountain View Elementary School on the Big Island, made of a plastic sub-surface reinforcement structure or interlocking grid system called *Gravelpave 2* in substitution for a three-foot-wide concrete walkway.

New construction or major alteration involving walkways for the Mountain View Elementary School shall comply with 4.5 Ground and Floor Surfaces and 4.3 Accessible Route.

[Rul: 11/01] (Auth and Imp: HRS §103-50)

If you have any questions or comments regarding this ruling, please call us at 586-8121.

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